

What is claimed is:

1. A system for displaying a wide field of view video image of a location, the system comprising:

a plurality of location cameras for placement at the location to capture the wide field of view video image as a plurality of individual video images together covering the desired field of view;

a distance sensor unit for sensing distances of closest objects in one or more overlap areas between field of views of the location cameras from the two or more location cameras covering each respective overlap area;

a display unit for displaying the plurality of individual video images to a user for creating a visual experience of the location based on the sensed distances to the closest object.

2. The system of claim 1 further comprising a processor unit for determining a horizontal span of each individual video image displayed by the display unit based on the sensed distances of the closest objects.

3. The system of claim 2, comprising four location cameras in a square arrangement for capturing an outwardly directed 360° field of view of the location, and the display unit comprising four display screens in a square arrangement, each display screen arranged for displaying the individual video image of one of the location cameras to a user located inside the square screen arrangement.

4. The system of claim 2, wherein the processor unit is arranged for calculating pixel column positions for desired horizontal frame edges of each displayed individual video image, and for determining a horizontal scale for each displayed individual video image based on the calculated pixel column positions.

5. The system of claim 2, wherein the display unit is arranged for effecting a change in the horizontal span of each displayed individual video image without changing a vertical span of each displayed individual video image.

6. The system of claim 2, further comprising at least one user camera for capturing at least one video image of the user, and a second display unit for placement at the location to display the captured video images of the user at the location.

7. The system of claim 6, wherein the system includes a plurality of user cameras and the second display unit comprises a plurality of screens, each screen arranged for displaying a video image from the user cameras.

8. The system of claim 6, wherein the second display unit is integrated with a structure for placement of the location cameras at the location.

9. The system of claim 2, wherein the distance sensor unit comprises a pair of sensor elements associated with each location camera, and wherein the sensor elements of the pair are arranged for sensing distances of closest objects from the associated location camera along opposite vertical edges of the field of view of said associated location camera.

10. The system of claim 9, wherein the distance sensor unit comprises a further sensor element between paired adjacent location cameras for sensing distances of closest objects along a line extending substantially centrally through an overlap area of the respective fields of view of the adjacent location cameras.

11. A system for displaying a wide field of view video image of a location, the system comprising:

a display unit for displaying a series of individual video images from a series of location cameras together covering the wide field of view to a user for creating a visual experience of the location wherein a horizontal span of each individual video

image displayed by the display unit is determined based on distances of identified objects in one or more overlap areas between field of views of the location cameras from the two or more location cameras covering each respective overlap area.

12. The system of claim 11 wherein the display unit comprises a plurality of display screens arranged to display a 360 ° field of view.

13. the system of claim 12 wherein the display unit comprises four screens arranged in a square.

14. A system for capturing a wide field of view video image of a location, the system comprising:

a series of location cameras for placement at the location to capture the wide field of view video image as a plurality of individual video images together covering the desired field of view;

a distance sensor unit for sensing distances of closest objects in one or more overlap areas defined by respective fields of view of neighboring location cameras covering each respective overlap area.

15. The system of claim 14 further comprising a processor unit for generating display information for use during display of the individual video images to a user for creating a visual experience of the location, the display information comprising the sensed distances of the closest objects.

16. A method for displaying a wide field of view video image of a location, the method comprising the steps of:

capturing the wide field of view video image as a plurality of individual video images captured by a plurality of location cameras together covering the desired field of view;

sensing distances of closest objects in one or more overlap areas defined by the respective fields of view of neighboring location cameras,

determining a horizontal span of each individual video image to be displayed by a display unit based on the sensed distances of the closest objects; and

displaying, the plurality of individual video images, in accordance with the determined horizontal span of each video image, to a user for creating a visual experience of the location.

17. The method of claim 16 further comprising, calculating pixel column position for desired horizontal frame edges of each displayed individual video image; and

determining a horizontal scale for each displayed individual video image based on the calculated pixel column positions.

18. The method of claim 17 further comprising, scaling each individual video scaling image to be displayed by changing the horizontal span of each individual video image without changing a vertical span of each individual video image.

19. The method of claim 16, wherein, sensing distances of closest objects from the associated location camera, includes sensing a distances of the objects from the associated location camera along opposite vertical edges of the field of view of said associated location camera.

20. The method of claim 19 further comprising sensing distances of closest objects along a line extending substantially centrally through an overlap area of the respective fields of view of adjacent location cameras.

21. A system for displaying a wide field image comprising:
a plurality of cameras arranged such that respective image capture fields of neighboring cameras overlap in an overlap region;

at least one distance sensor for determining a distance to an object identified in each overlap region, and

a display unit for displaying a plurality of contiguous image segments forming the wide field image, each image segment being derived from an image captured by one of said plurality of cameras at least partly on the basis of the distance to an object identified in the overlap region between the camera and at least one neighboring camera.

22. The system of claim 21, wherein the wide field image has a field of view of 360° , and wherein the plurality of cameras are arranged around a central axis in a formation having a combined image capture field of 360° .

23. The system of claim 21, wherein the plurality of cameras includes four cameras arranged in a square, with each camera having an image capture field spanning at least 90° .

24. The system of claim 23 wherein the display unit comprises four display screens in a square arrangement, wherein each display screen is configured to display an image segment derived from an image captured by a different one of the plurality of cameras.

25. The system of claim 24 wherein the display unit is configured to provide a provide a user with a panoramic view of a remote location at which the plurality of cameras are located.

26. The system of claim 25 wherein the system further includes a remote unit, housing the plurality of cameras, and that is located at the remote location.

27. The system of claim 26 wherein the system further includes at least one camera associated with the display unit that is configured to capture an image of the user of the display unit, and wherein the remote unit includes at least one display screen to display the captured image of the user of the display unit.

28. The system of claim 27 wherein the remote unit is configured to provide an avatar for the user of the display unit at the remote location.